Dengue virus cell entry

Ayala Nunez, Vanesa

Stellingen

Behorende bij het proefschrift

Dengue virus cell entry: unraveling the role of antibodies, maturation status, and antiviral drugs

1. Antibody-bound dengue virus particles enter the cell through a phagocytosis-like pathway that involves a novel mechanism of initial virus-cell contact (this thesis).

2. Antibody-bound dengue virus induces an active capturing mechanism in macrophage cells where actin protrusions actively search and capture virus particles from the environment. This is a remarkable example of how viruses can hijack pathogen-sensing functions of macrophages for their own benefit (this thesis).

3. Macropinocytosis may serve as a parallel entry pathway for both antibody-opsonized and non-opsonized dengue virus into macrophages (this thesis).

4. The antibody, but not the maturation status of a dengue particle, dictates the route of cell entry of the virus (this thesis).

5. Viral entry is an appealing target for antiviral compounds since compounds that function as entry inhibitors will prevent not only infection but subsequent immune activation (this thesis).

6. An effective anti-DENV entry inhibitor should target the membrane fusion process of the virus within endosomes, phagosomes and/or macropinosomes (this thesis).

Nilda Vanesa Ayala Núñez

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